

405 KAR 16:110. Surface and groundwater monitoring.

RELATES TO: KRS 350.100, 350.405, 350.420, 350.465, 40 C.F.R. Parts 122, 124, 434

STATUTORY AUTHORITY: KRS 350.028, 350.420, 350.465

NECESSITY, FUNCTION, AND CONFORMITY: KRS Chapter 350 requires the cabinet to promulgate administrative regulations establishing performance standards for protection of people and property, land, water, and other natural resources, and aesthetic values, during surface mining activities and for restoration and reclamation of surface areas affected by mining activities. This administrative regulation establishes requirements for the monitoring and reporting of surface water quality and quantity, and groundwater levels and quality and aquifer conditions, and the required duration of monitoring.

Section 1. General Requirements. (1) Surface and groundwater monitoring shall be conducted in a manner acceptable to the cabinet and utilize, at a minimum, a sufficient number of appropriately located groundwater monitoring wells (or springs), surface water monitoring stations, and quantity and quality parameters to demonstrate that:

(a) The mining and reclamation operations shall minimize disturbances to the hydrologic balance within the permit area, shadow area, and adjacent area pursuant to 405 KAR 16:060;

(b) The mining operation is meeting applicable effluent limitations and stream standards as required by 405 KAR 16:060, Section 1(3);

(c) Reclamation as required by 405 KAR is being accomplished and the operation is preventing material damage to the hydrologic balance in the cumulative impact area pursuant to 405 KAR 8:010, Section 14(2) and (3);

(d) The mining operation, pursuant to 405 KAR 16:060, Section 8, has not proximately resulted in the contamination, diminution, or interruption of a ground or surface water supply that is used for domestic, agricultural, industrial, or other beneficial purpose; and

(e) The mining operation shall comply with water quality criteria for bond release pursuant to 405 KAR 10:040.

(2) Surface and groundwater monitoring shall be coordinated with baseline data collection by conducting surface and groundwater monitoring at locations where baseline data was collected, or by other appropriate data collection and analysis procedures that shall allow a comparison of baseline conditions with during-mining and postmining conditions.

(3) Equipment, structures, monitoring wells, or other facilities used to monitor surface and groundwater quantity and quality shall be properly installed, maintained, and operated, and shall be removed or otherwise properly disposed of, including sealing of monitoring wells, if no longer needed; except that monitoring wells may be transferred to the surface owner of lands where the well is located, pursuant to 405 KAR 16:060, Section 7.

(4) Except as established in subsection (7) of this section:

(a) Surface and groundwater monitoring data collection shall begin during the calendar quarter of initial disturbance and continue during mining and reclamation until final bond release; and

(b) Surface and groundwater monitoring data shall be collected once each calendar quarter, with no two (2) samples collected closer than thirty (30) days apart. The results of the quarterly data collection shall be submitted to the appropriate regional office on or before the end of the first month following the calendar quarter in which the data were collected.

(5) If the results of any data collection indicate noncompliance with a permit condition, the permittee shall promptly notify the cabinet in writing and shall take immediate corrective actions to return the operations to compliance with all permit conditions.

(6) The cabinet may require the installation of additional groundwater monitoring wells and

surface water monitoring stations, the collection of additional quantity and quality parameters, and more frequent data collection and submittal if additional information is needed to comply with the requirements of subsection (1) of this section.

(7)(a) Pursuant to an application for a revision of a permit, the cabinet may approve reduction of the sampling frequency for surface or groundwater, except as required by the KPDES permit, if the permittee demonstrates to the cabinet's satisfaction, using the monitoring data obtained pursuant to this administrative regulation, that:

1. The operation has minimized disturbance to the hydrologic balance in the permit and adjacent areas and prevented material damage to the hydrologic balance outside the permit area;

2. Water quantity and quality are suitable to support the postmining land uses; and

3. The water rights of other users have been protected or replaced.

(b)1. The cabinet shall not approve reduction of sampling frequency to less than quarterly until at least thirty (30) months after Phase I bond release on the permit.

2. The cabinet shall not approve a sampling frequency of less than once per year.

Section 2. Groundwater Monitoring. (1) Groundwater monitoring shall be conducted according to the requirements of Section 1 of this administrative regulation and the monitoring plan required by 405 KAR 8:030, Section 32(4).

(2) At a minimum, groundwater monitoring shall include the parameters of:

- (a) Water levels; and

- (b) Total dissolved solids, or specific conductance corrected to twenty-five (25) degrees Centigrade; pH; dissolved iron; dissolved manganese; acidity; alkalinity; and sulfate.

(3) If the applicant can demonstrate to the satisfaction of the cabinet by use of the baseline geologic or hydrologic information, the mining and reclamation plan, and the determination of probable hydrologic consequences that a particular water transmitting zone in the proposed permit and adjacent area does not serve as an aquifer that significantly ensures the hydrologic balance anywhere within the cumulative impact area, then monitoring of that water transmitting zone may be waived by the cabinet.

Section 3. Surface Water Monitoring. (1) Surface water monitoring shall be conducted according to the requirements of Section 1 of this administrative regulation and the monitoring plan required by 405 KAR 8:030, Section 32(4).

(2) At a minimum, surface water monitoring shall include the parameters of:

- (a) Discharge; and

- (b) Total dissolved solids, or specific conductance corrected to twenty-five (25) degrees Centigrade; total suspended solids; pH; total iron; total manganese; acidity; alkalinity; and sulfate.

(3) Surface water monitoring for KPDES.

(a) Monitoring of point source discharges under a KPDES permit shall be conducted in accordance with 40 C.F.R. Parts 122, 123, and 434 and in accordance with the requirements of the KPDES permit.

1. The permittee shall submit a copy of the KPDES monitoring results to the cabinet on the time schedule and in the format required by the KPDES permit.

2. The permittee shall report all noncompliances with the KPDES permit to the cabinet in the manner required by the KPDES permit.

(b) Compliance with KPDES monitoring requirements shall not relieve the permittee of the obligation to comply with other surface and groundwater monitoring requirements of this administrative regulation. (8 Ky.R. 1538; Am. 9 Ky.R. 702; eff. 1-6-1983; 11 Ky.R. 1840; 12 Ky.R.

187; eff. 8-13-1985; 15 Ky.R. 464; 1078; eff. 12-13-1988; 44 Ky.R. 636, 1315; eff. 1-5-2018.)